

Section 8 Project Effect and Mitigation Recommendations

The following project effect discussion and cultural resource management recommendations are intended to facilitate project planning and support the proposed project's required historic preservation consultation. This discussion is based on the results of this archaeological inventory survey investigation and CSH's communication with agents for the project proponents regarding the project's potential impacts to the cultural resources described in the Results of Fieldwork section, above.

8.1 Project Effect

The purpose of the proposed Honolulu High-Capacity Transit Corridor Project (HHCTCP) is to provide high-capacity rapid transit in the highly congested east-west transportation corridor between Kapolei and the University of Hawai'i at Mānoa via a fixed guideway rail transit system. Construction Phase I of the HHCTCP (which, for the purposes of this investigation includes the western-most portion of Construction Phase II) consists of an approximately 7-mile segment extending from North-South Road in East Kapolei to Waimano Home Road in Pearl City. In addition to the guideway, the project will require construction of transit stations and support facilities, including a vehicle maintenance and storage facility and park and ride lots. Seven proposed transit stations are in Construction Phase I of the project, including: East Kapolei Station; University of Hawai'i at West O'ahu Station; Ho'opili Station; West Loch Station; Waipahu Transit Center Station; Leeward Community College Station; and Pearl Highlands Station. Project construction will also require relocation of existing utility lines within the project corridor that conflict with the proposed project design. Minimally, land-disturbing activities would include grading of facility locations and excavations for guideway column foundations, subsurface utility installation, and facility construction.

The approximately 156-acre Construction Phase I project area consists of: the approximately 7 mile long transit corridor; seven transit stations (approximately 5 acres); four park-and-ride facilities (approximately 25 acres); and a vehicle maintenance and storage facility (approximately 44 acres). The Construction Phase I project's area of potential effect (APE) for subsurface cultural resources is defined as all areas of direct ground disturbance. Although the extent of ancillary subsurface impacts, for example those related to the relocation of existing utilities, is still to be determined, it is estimated that the project's area of direct ground disturbance / APE is approximately 75 acres.

This archaeological inventory survey investigation identified the following cultural resource within the project area. This cultural resource may be affected by the proposed project:

1. SIHP # 50-80-09-7751, subsurface agricultural deposit, evaluated as significant under Criterion D of the National and Hawai'i Registers of Historic Places evaluation criteria.

Under Hawaii State historic preservation review legislation, CSH's project-specific effect recommendation is "effect, with proposed mitigation commitments." Under federal historic preservation review legislation a project effect recommendation of "no adverse effect" is warranted, with the understanding that the proposed mitigation measures (described below) will

be carried out to mitigate the undertaking's potential effect on National register-eligible cultural resources.

8.2 Mitigation Recommendations

To reduce the proposed project's potential effect on a significant cultural resource, the following mitigation measure is recommended. An archaeological data recovery program should be carried out within the project footprint of the *makai* (seaward) entrance building of the Waipahu Transit Center Station. This archaeological data recovery program will focus on further documentation of the stratigraphy and the collection of additional samples from the SIHP # 50-80-09-7751 subsurface agricultural (*lo'i* or pondfield) cultural deposit, which was identified during the current archaeological inventory survey.

Figure 183, above, shows the locations of the six archaeological inventory survey test excavations that have already been documented within the relatively small footprint of the *makai* entrance building of the Waipahu Transit Center Station, the construction of which has potential to affect at least a portion of the SIHP # 50-80-09-7751 subsurface deposit. These six test trenches did not expose structural elements related to the agricultural deposits, such as pondfield berms, walls, or *'auwai* (irrigation channels). Accordingly, it is quite possible that the proposed data recovery excavations will also not encounter these types of agricultural infrastructure within the relatively small area of the transit station footprint. It is therefore recommended that the archaeological data recovery program focus on further documentation of the buried sediment layer itself, including collection of bulk column sediment samples, from which palynological (pollen) and radiocarbon dating samples can be extracted and analyzed. (Taxonomic identification of wood charcoal radiocarbon dating samples should be completed prior to radiocarbon dating analysis.) These bulk column sediment samples can be used to better characterize the age and/or use-life of the agricultural sediment, its physical characteristics, and potentially changes in the surrounding environment over time. Should structural elements be located during data recovery excavations, the documentation of these features will provide additional information concerning SIHP # 50-80-09-7751. The additional data developed by the archaeological data recovery program will mitigate the project's potential effect on the SIHP # 50-80-09-7751 subsurface cultural deposit.

An archaeological data recovery plan should be prepared for review and approval of the State Historic Preservation Division (SHPD) prior to project-related construction activities. In accordance with Hawai'i Administrative Rules (HAR) 13-278, the data recovery plan should describe specific research objectives, data requirements, and methods.

Based on the results of this archaeological inventory survey, and with the understanding that archaeological data recovery program described above will be completed prior to project construction in the vicinity of SIHP # 50-80-09-7751, no further archaeological mitigation measures are recommended for the remainder of the HHCTCP Construction Phase I project area. If, in the unlikely event that subsurface cultural deposits or human skeletal remains are encountered during the course of project-related construction activities, all work in the immediate area should stop and the SHPD should be promptly notified.